

ABSTRACT

An externally powered, self cleaning strainer incorporating a projectile shield, which is capable of operating for an extended period of time. A suitably shaped, motor driven, impeller creates a localized, radially outward flow of fluid in the vicinity of the strainer inlet. The projectile shield has a lower surface shaped to deflect fluid to the strainer at a constant velocity, enabling the impeller to eject debris more efficiently. Maintaining a constant flow through the strainer also avoids additional head loss associated with accelerating flow. The self cleaning strainer may also include a brush attached diametrically opposite to the impeller to aid in removing debris from the inlet side of the strainer. The impeller may also be shaped so that when it is swept past the inlet side of the strainer, it causes a localized, reverse flow through the strainer, thereby removing debris particles from within the strainer.